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CONDENSER: Delco-Remy Part No. 1869704.

Capacity—18-.23 microfarad.

DISTRIBUTOR: Delco-Remy 1110815. Automatic and vacuum advance type with new "center-bearing" breaker plate.

► Breaker Plate Bearing Assembly—Plate rotates on 3 bakelite buttons on support plate with spring tension adjustment (shim washers) on underside of support plate. Pull required to move plate should be 8 oz. min., 16 oz. max. with breaker plate assembly out of housing.

See "Delco-Remy Center-Bearing Breaker Plate Distributor" in Electrical Equipment Section.

Breaker Gap—.015". Limits .0125-.0175".

Cam Angle—Test limits with .016" gap—21-30°.

See "Delco-Remy Cam Angle" in Electrical Equipment Section.

► CAUTION—Use of cam angle to set point gap not recommended by car manufacturer. If dwell meter used, make final check that gap within .0125-.0175".

Breaker Arm Spring Tension—19-23 ounces.

Rotation—Counter-clockwise viewed from above.

Distributor Automatic Advance		Engine	
Degrees	R.P.M.	Degrees	R.P.M.
Start.....	250	2.....	500
7	400	14.....	800
13	1500	26.....	3000

Vacuum Spark Control: Delco-Remy No. 1116048.

Plunger Travel— $\frac{1}{8}$ ".

Distr. Degrees	Eng. Degrees	Vacuum Advance
		Vacuum (" of HG)
Start	0°	5-7"
5½"	11°	10½"-12½"

IGNITION TIMING

Std. Setting	Flywheel Degrees	Piston Pos.
Series 40①, 50②	4° BTDC	.0063" BTDC.
Series 70③	6° BTDC	.0149" BTDC.
①—Regular Fuel. ②—Ethyl Fuel.		

► CAUTION—Ignition timing should be set within yellow band of flywheel mark for proper engine performance. Flywheel Mark—"ADV. 4°" (for 40, 50), "ADV. 6°" (for 70) followed by yellow knurled section on flywheel $\frac{1}{8}$ " wide which gives timing range of 1° (4-5° for 40, 50; 6-7° for 70). Index mark located on edge of timing hole under cover on housing above starter. Timing (With Synchroscope)—Connect synchroscope to #1 spark plug lead, direct light on flywheel through inspection hole in right front face of housing. Idle engine at speed not greater than 350 RPM., loosen two distributor hold-down screws, rotate distributor until "ADV" mark on flywheel (see Flywheel Mark Note above) lines up with indicator, tighten hold-down screws. Refer to Final Ignition Setting. Timing (Without Synchroscope)—With #1 cylinder on compression, turn engine over until "ADV" mark on flywheel lines up with indicator in inspection hole in right front face of housing. Loosen two distributor hold-down screws, rotate distributor until contacts begin to open, tighten hold-down screws. Final Ignition Setting—Must be within yellow band of flywheel mark (leading edge desired). If timing advanced, engine roughness may result even with high octane fuel. If timing retarded to overcome heavy "ping", engine performance and economy will be lessened (higher octane fuel should be used). A very light "ping" may occur with part throttle on a hard pull, or during acceleration with wide open

throttle between 10-20 MPH. Do not retard timing to eliminate this light "ping."

CARBURETOR

Carter WCD (All Series) or Stromberg AAV-167 (Series 40, 50), AAV-267 (Series 70). Dual downdraft types with Automatic Choke.

Carter Stromberg
Series 40, 50.....WCD 663S.....AAV-167 Code 7-69
Series 70.....WCD 664S.....AAV-267 Code 7-70
Casting No. (Carter)—546 (for 663S), 573 (664S) on face of flange.
Code No. (Stromberg)—Stamped either on body or on a metal tag attached to the body.
See Carburetor Section for complete data.

Settings (Idle Setting, Float Level, and Accelerating Pump Setting): See Tune-Up.

Metering Jets & Rods—See Carburetor Section for Carter & Stromberg Jet Specifications.

Throttle Linkage Adjustment (Synchro-Mesh Transmission): Check linkage for smooth operation of throttle valve from closed to wide open position (pedal correctly secured to floor, pedal rod free in hole in floor mat, return spring proper tension for closed position). Wide open throttle stop should be accelerator pedal striking floor mat (not throttle lever stop striking boss on carburetor). Adjust as follows: With linkage disconnected at throttle operating ball joint, open throttle valve to wide open position against stop, have man press accelerator against floor mat, adjust ball joint so screw will just enter upper hole in throttle lever, turn ball joint 1 or 2 turns clockwise, connect ball joint to throttle lever. Check choke unloader operation.

► Throttle Linkage Adjustment (Dynaflow Drive Cars): With engine idling at 450 RPM., clearance between edge of bracket (attached to dash at lower end of vertical equalizer shaft) and ear on lever (just above shaft operating lever) should be $\frac{1}{32}$ – $\frac{1}{16}$ " (adjust at ball joint end of throttle operating rod). Check wide open position of throttle valve with engine stopped and adjust at ball joint (as above) to secure wide open throttle position with pedal striking floor mat (not throttle lever stop striking boss on carburetor). Check choke unloader operation. Check Dash-Pot Setting (following).

► Dash Pot Setting (Dynaflow Drive Cars): Turn adjusting screw on lever ahead of dash pot plunger for $\frac{1}{64}$ – $\frac{1}{32}$ " clearance between fast idle cam and fast idle screw with choke valve held closed.

Fast Idle: Carter Dual (WCD) Carburetor type or Stromberg Type (AAV-167, AAV-267 Carburetors). See Carburetion Equipment Section for data.

Setting (Carter Carb.)—Adjust fast idle screw on throttle shaft lever for .015" (663S), .018" (664S) throttle opening with choke valve tightly closed and screw on "high" step of fast idle cam.

Setting (Stromberg)—Close choke valve on #53 (.0595") drill rod, adjust by bending fast idle cam rod so that locking lever on throttle valve shaft just clears loose lever on fast idle cam stud as throttle is opened and closed.

Automatic Choke: Carter Climatic Control (Dual Carb.) or Stromberg AAV-16, AAV-26 Type.

See Carburetion Equipment Section for complete data. Setting (Carter Carb.)—Centered (Index mark on cover centered on reference mark on housing).

Setting (Stromberg)—"V" mark on cover one graduation Lean (40, 50), Centered (70).

CARB. EQUIPMENT

Air Cleaner: AC No. 1544238 (40, 50 Incl. Early Dynaflow), 1544838 (50 Later Dynaflow), 1544239 (70). Filter Element—AC No. 19 (all).

Servicing—Clean and refill with 1 pint of SAE No. 50 engine oil at 5000 mile intervals.

Fuel Pump: AC Type AJ, No. 1537337 (40, 50), 1537338 (70), diaphragm type fuel-and-vacuum pump.

Replacement Pump—AC No. 529 (40, 50), 530 (70).

Pressure— $4\frac{1}{2}$ – $5\frac{1}{2}$ lbs. at fuel pump outlet port or 4-5 lbs. at carburetor inlet.

See Carburetion Equipment Section for complete data.

Gasoline Gauge: AC Electric type.

Dash Unit—AC No. 1517078 (40), 1517040 (50, 70).

Tank Unit—AC No. 1516277 (40), 1517146 (50, 70).

See Carburetion Equipment Section for complete data.

BATTERY

Delco 15E4 (40, 50); 17E4 (70); 19E4 (Optl. 50, 70); 17K4 (Export 50, 70). 6 Volt, 15 plate (15E4), 17 plate (17E4, 17K4), 19 plate (19E4).

Grounded Terminal—Negative (—) to engine block.

Location—On right side under engine hood.

STARTER

Delco-Remy Model 1107049 (40 LHD), 1107078 (50 RHD), 1107953 (70 LHD), 1107057 (40, 50 RHD), 1107935 (70 RHD).

Armature—1867897 (Series 40, 50), 820158 (Series 70).

Drive—Overrunning clutch (solenoid pinion shift).

Rotation—Counter-clockwise at commutator end.

Brush Spring Tension—24-28 ounces.

Cranking Engine (40, 50)—90-110 RPM., 150 amps., 4.5 volts.

(70)—105 RPM., 175 amperes, 5 volts.

Performance Data—1107049, 57, 78

Torque	R.P.M.	Volts	Amperes
0 ft. lbs.	5000	5.7	80①
12 "	Lock	3.4	525

Performance Data—1107935, 53

0 ft. lbs.	5500	5.7	80①
15 "	Lock	3.0	600

①—Includes current draw of starter switch.

Starting Switch: Delco-Remy Solenoid Switch No. 1118019 controlled by Stromberg Starter Switch No. 385000 (Cars with Stromberg Carb.), Carter Car Starter Model 192-11U (Cars with Carter Carb.).

► STROMBERG STARTER SWITCH CHANGES FOR IMPROVED PERFORMANCE: See "Stromberg Starter Switch" in Electrical Equipment Section.

Starter Switch Setting: See Electrical Equipment Section.

► Dynaflow Neutral Safety Switch—Delco-Remy No. 1997838. At lower end of steering column. Connected in starter control circuit so that starter operative only with lever in "N" Neutral or "P" Parking.

► Neutral Safety Switch Adjustment—See "Buick Dynaflow Drive" in Transmission Section.

GENERATOR

Delco-Remy 1102679 (40), 1102709 (50), 1102708 (70). Two brush types with voltage & current regulation. Armature—D-R 1877808 (1102679), 1912599 (1102708, 9).

Charging Rate Adjustment—None. See Regulator.

Maximum Charging Rate—(1102679) 34-36 amperes, 8.0 volts, 2600 RPM., 25 MPH. (1400 Eng. RPM), Hot.